88999

Circuit for the Use of a D. C. Operational   S/119/61/000/001/003/013
Amplifier for the Multiplication of Variables   B019/B067

closed by square-topped pulses. With positive pulses the input resistor
is earthed in the center. Thus, the transfer coefficient of the
amplifier is zero, with negative pulses it is finite. If the reciprocal
of the pulse duty factor of the square-topped pulses corresponds to the
second multiplicand, the output voltage is equivalent to the product of
input voltage and the reciprocal of the pulse duty factor. The conserva-
tion of strict proportionality of the amplifier coefficient and the
block diagram of a multiplication circuit shown in Fig. 2 are then
discussed. The circuit is an electronic equivalent to a servosystem. It
contains a group of operational amplifiers which are equivalent to the
potentiometers of a servosystem. It allows the multiplication of two
arbitrary input voltages. Under the supervision of senior designer V. B.
Ushakov, Doctor of Technical Sciences, a simulator was developed at the
otdel elektricheskogo modelirovaniya NII Schetmasha (Branch for Electrical
Simulation of the NII Schetmash). A d. c. operational amplifier was used
for the multiplication of a quantity which was variable from zero to a
certain positive value, by nine different quantities. This operational
amplifier contained two transformation blocks of types I and II. The

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66777

Circuit for the Use of a D. C. Operational   S/119/61/000/001/003/013
Amplifier for the Multiplication of Variables   B019/B067

circuits of these types are shown in Figs. 3 and 4. Type I is a d. c.
amplifier with triode keys at the input circuit. Type II consists of a
direct current d. c. amplifier, a sawtooth generator and a Schmidt-
trigger. In Fig. 2 type I corresponds to the amplifiers $y_1, y_2, \ldots, y_n$,
type II to NO and BM. Engineers L. V. Achkasova, N. F. Bushko, and T. L.
Solov'yeva took part in the investigations. There are 5 figures and 4
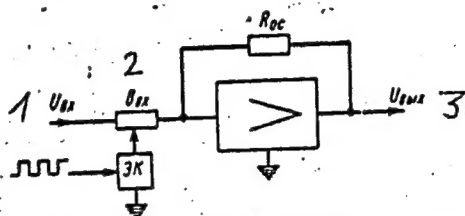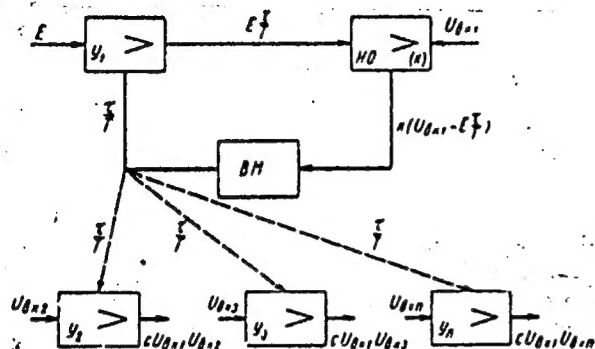references: 3 Soviet and 1 US.

Рис. 1. Структурная схема усилителя с переменным коэффициентом
передачи:
R_{oc} — сопротивление обратной связи.

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Рис. 2. Блок-схема системы перемножения:
T — период; c — постоянный коэффициент.

Legend to Fig. 1: 1) U_{input}; 2) R_{input}; 3) U_{output}; 4) electronic key.
Legend to Fig. 2: E) Standard voltage; $y_1, y_2, \ldots y_n$ operational amplifiers;
BM-time modulators. NO-zero element.

Card 4/4

VITENBERG, I.M., kand.tekhn.nauk; GINZBURG, S.A., kand.tekhn.nauk;
Gornshteyn, V.M., kand.tekhn.nauk

Use of an electronic simulating device in calculating the efficiency
of operation of power systems with hydroelectric power stations.
Trudy VNIIE no.8:233-242 '59.   (MIRA 13:9)
                    (Hydroelectric power stations)
                    (Electric power)

VITENBERG, I.M.

Designing specialized electronic analog computers for controlling technological processes. Priborostroenie no.12:11-13 D '61.
(MIRA 14:12)

(Electronic analog computers)

Relation between the temperature coefficients of cuprous oxide resistors and loading. M. I. Vitenberg. J. Tech. Phys. (U. S. S. R.) 9, 1671-6(1939); cf. C. A. 34, 1883⁴.—For the elec. resistance r of Cu_2O the equation $\log r = $ const. $- \beta \log T$ holds. The value of β slowly increases when the applied potential changes from -7 to $+0.1$ v. and then rapidly falls when the potential rises to $+0.35$ v.   J. J. Bikerman
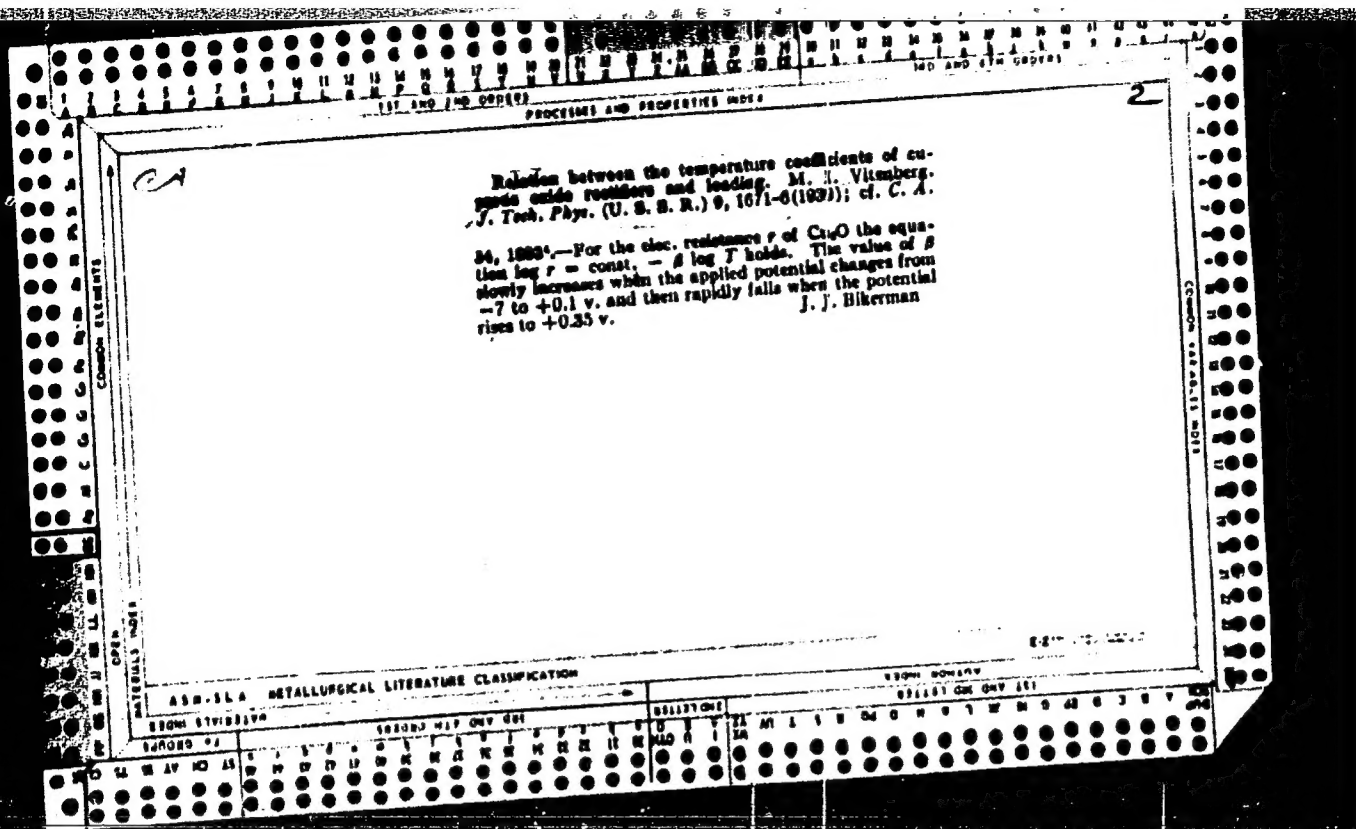
Specific coefficient of the quality of cuprous oxide recti fiers. M. I. Vitenberg. *J. Tech. Phys.* (U. S. S. R.) 9, 1945-51 (1939). The efficiency of a rectifier usually is expressed by the ratio, r_1/r_0, of the resistance observed when the current passes in the unwanted to that in the wanted direction; both resistances are measured at the same voltage. This ratio changes with the applied voltage. A better indicator of the efficiency is the ratio r_1/r_0 when r_1 is measured at 4 v. and r_0 is the resistance for the c. d. of 50 ma./sq. cm. This ratio is proportional to $S^{0.4}$, S being the area of the rectifier. The expression $r_1/r_0 S^{0.4}$ is, therefore, independent of voltage and size of the rectifier.

J. J. Bikerman

A. S. M. — S. L. A. METALLURGICAL LITERATURE CLASSIFICATION

Temperature coefficients of selenium rectifiers   M. I. Vitenberg. *J. Tech. Phys.* (U. S. S. R.) 9, 2156-62 (1939).—The resistance of Se rectifiers measured at a const. c. d. in the right direction slowly decreases when the temp. rises from 8 to 50°, while the resistance in the wrong direction measured at a const. voltage either is independent of temp. or depends on it in a complicated manner. The temp. coeff. for the right direction is strongly affected by the c. d. when it is small (below 0.2 milliamp./sq. cm.) and is const. at higher c. d. The equations derived for Cu_2O rectifiers (cf. *C. A.* 34, 1883⁴) are applicable to Se rectifiers as well.   J. J. B.

ASM SLA   METALLURGICAL LITERATURE CLASSIFICATION

VITENBERG, M.I.

VITENBERG, M. I. Docent.

"DC Inductance of Relays".   Vol 6, No. 2,

Avtomatika i Telemekhanika,   No. 2, 3, 4, 5, (1941).

ITTTE G, L. I., Docent

"Time Constant for Code Relays".   Vol. 4, No. 2,

Avtomatika i Telemekhanika,   No. 2, 3, 4, 5, (194).

GITIN, L. I., Docent.

"Nomograms for the Calculation of Telephone Relay Windings," Vol. 4, No. 3.
Avtomatika i Telekhanika, No. 2, 4, 3, 5, (1941).

VITKEVIG, V.I.

"Effect of the Capacity on the Working Time of a Telephone Relay."

/Sci Res Inst of MPSS - Min Prom Sredst Suysei 7/

Avto i Tele, 9, 5, 1948.

VITENBERG, Moisey Izrailevich; BERGMAN, P.Ya., redaktor; MIKHAYLOVA, Ye.M., tekhnicheskiy redaktor

[Computation for electromagnetic relays of automatic control and telecommunication systems] Raschet elektromagnitnykh rele dlia apparatury avtomatiki i sviazi. Moskva, Gos. energ. izd-vo, 1956. 464 p.   (MLRA 9:9)

(Electric relays)

VITENBERG, M. I.

PA 22T46

USSR/Engineering
    Relays
    Curves

Jan 1947

"Time-Lag Curves for Electromagnetic Relays," M. I.
Vitenberg, 4 pp

"Avtomat i Telemekh" Vol VIII, No 1

Explains the statement that the time-lag of electro-
magnetic relays can be defined graphically by cal-
culating the time-lag with reference to a coeffi-
cient "m," determined by the number of ampere turns.

22T46

VITENBERG, M. I.

Temperature coefficients of selenium rectifiers. M. I. Vitenberg. J. Tech. Phys. (U. S. S. R.) 0, 2156-70 (1940).—The resistance of Se rectifiers measured at a const. c. d. in the right direction slowly decreases when the temp. rises from 8 to 50°, while the resistance in the wrong direction measured at a const. voltage either is independent of temp. or depends on it in a complicated manner. The temp. coeff. for the right direction is strongly affected by the c. d. when it is small (below 0.2 milliamp./sq. cm.) and is const. at higher c. d. The equations derived for Cu_2O rectifiers (cf. C. A. 34, 1893) are applicable to Se rectifiers as well.   J. J. B.

VITENBERG, M. I.

PA 187T36

USSR/Mathematics - Relays,   Jan/Feb 51
Pulse Circuits

"The Release Time of Relays Under Pulse
Conditions of Operation," M. I. Vitenberg

"Avtomat i Telemekh" Vol XII, No 1, pp 61-67

Calculates release time of relays operating in
pulse conditions. Derives curves of release
time (type 100 relay) vs inserted resistance,
and established ampere turns for various dura-
tions of magnetizing pulses. Derives curves of
release time (for normal and slow relays of
type 100) vs load for various pulse durations.

187T36

USSR/Mathematics - Relays, (Contd)   Jan/Feb 51

of magnetizing current. Finally, derives com-
parative curves of release time for various
types of relays; shows that it is more con-
venient to use normal relays with shortened
coils instead of time-lag relays as series re-
lays. Submitted 22 Oct 48; resubmitted 5 May 50
after revision.

187T36

VITENBERG, M. I.

Temperature coefficients of selenium rectifiers. M. I. Vitenberg. J. Tech. Phys. (U. S. S. R.) 9, 2150-62 (1939). The resistance of Se rectifiers measured at a const. c. d. in the right direction slowly decreases when the temp. rises from 8 to 50°, while the resistance in the wrong direction measured at a const. voltage either is independent of temp. or depends on it in a complicated manner. The temp. coeff. for the right direction is strongly affected by the c. d. when it is small (below 0.2 milliamp./sq. cm.) and is const. at higher c. d. The equations derived for Cu_2O rectifiers (cf. C. A. 34, 1893⁹) are applicable to Se rectifiers as well.   J. J. B.

VITENBERG, Moisey Izrailevich; ZELIGER, N.B., prof., retsenzent; ARONOVICH, B.I., dots., retsenzent; USSER, A.S., red.; SOBOLEVA, Ye.M., tekhn. red.

[Design of electromagnetic relays for automatic control and communication apparatus] Raschet elektromagnitnykh rele dlia apparatury avtomatiki i sviazi. Izd.2., perer. i dop. Moskva, Gos. energ.izd-vo, 1961. 704 p. (MIRA 15:1)
(Electric relays)

29592

S/120/61/000/004/001/034
E032/E514

24.6731

AUTHORS: Val'dner, O.A. and Vitenberg, I.M.

TITLE: An electrical model of a linear accelerator

PERIODICAL: Pribory i tekhnika eksperimenta, 1961, No.4, pp.25-26

TEXT: In view of the increasing number of electron accelera-
tors which are either being built or are being designed, it is
desirable to evolve methods for the preliminary calculation of
the beam parameters.   From this point of view the machines can
be divided into two groups, namely, those with a working energy
of less than 30 MeV and those above this energy.   Design calcula-
tions carried out at МИФИ (MIFI) showed that in order to
ensure the necessary beam parameters all the accelerators belonging
to the second group can be discussed in terms of the same solution
describing the electron dynamics during the acceleration process.
The situation is different in the case of the first group, i.e. in
the case of low energies.   The electron dynamics in linear
accelerators of this type can be described by the following
equations:

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An electrical model of a linear ...   S/120/61/000/004/001/034
E032/E514

$$\frac{d\gamma}{d\xi} = A(\xi) \sin \varphi, \qquad\qquad (1)$$

$$\frac{d\varphi}{d\xi} = 2\pi\left[\frac{1}{\beta_B(\xi)} - \frac{1}{\beta_3}\right] ,$$

$$\gamma = (1 - \beta_3^2)^{-1/2} ,$$

where φ is the phase angle of the particle relative to the wave
and γ, ξ, A, β_B and β_3 are the dimensionless energy, linear
coordinate, electric field amplitude, wave velocity and electron
velocity, respectively. This equation can only be solved by
numerical integration. It is, therefore, interesting to produce
an electrical model for this set of equations. A model is
particularly useful if the electron energy is to be adjustable.
The search for acceptable solutions can be reduced to the selection
of functions describing changes in the accelerating wave amplitude

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An electrical model of a linear ...

29592

S/120/61/000/004/001/034
E032/E514

and the phase velocity along the accelerator. The present
authors have developed special apparatus which can be used to
investigate phase oscillations and the output beam parameters
for different forms of A and β_μ, the stability of the beam
parameters and the capture into the acceleration process under
different working conditions. The figure shows the circuit
employed. In electrical modelling the integration time
represents the dimensionless accelerator length. The functions
$\alpha_B = \beta_B^{-1}(\xi)$ and $\alpha_\gamma = \beta_\gamma^{-1}(\gamma)$ are generated by the non-linear
units БН2 (BN2) and БН3 (BN3). A detailed description of this
circuit is not given except that SУ1 (SU1) is an adding
amplifier and ИУ3 (IUZ) is an integrating amplifier. The phase
trajectories obtained with this apparatus can be inspected
visually on the screen of a CRO or photographed. Acknowledgments
are expressed to A. V. Shal'nov, I. K. Ogorodova and
Yu. V. Ogorodov. There is 1 figure.

SUBMITTED: December 13, 1960

Card 3/1 3

VITENBERG, M.I. (Leningrad)

Effect of ambient temperature on the overheating of the windings
and the heat transfer coefficient of a relay. Avtom. i telem. 21
no.3:384-392 Mr '60.   (MIRA 13:6)
(Electric relays)

9.2140

78168
SOV/103-21-3-14/21

AUTHOR: Vitenberg, M. I. (Leningrad)

TITLE: Dependence of the Winding Overheat and the Heat
              Exchange Coefficient of a Relay on the Temperature
              of Surrounding Air

PERIODICAL: Avtomatika i telemekhanika, 1960, Vol 21, Nr 3,
              pp 384-392 (USSR)

ABSTRACT: The winding overheat and the heat exchange
              coefficient are investigated as functions of the
              ambient temperature for three types of Soviet
              relays: type PMY (RMU), dimensions 24.7 x 38.5 x 41
              mm, weight 70 g; type P9 C 10 (RES10), dimensions
              11.1 x 16.5 x 26 mm, weight 6 g; and type PKH
              (RKN), dimensions 25.6 x 56.5 x 97 mm, weight
              290 g.   Curves are given showing the excess of
              winding temperature above the ambient temperature
              as function of the applied power.   This plot
              is obtained experimentally for the RMU-type relay
Card 1/4   at various temperatures of surrounding air of up

Dependence of the Winding Overheat and
the Heat Exchange Coefficient of a Relay
on the Temperature of Surrounding Air

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SOV/103-21-3-14/21

to 141° C. Based on this plot the general ex-
pression for the temperature of overheating of
relay winding is derived as function of the applied
power and of the ambient temperature:

$$\vartheta = a_0 - c\vartheta_0 + (b_0 - d\vartheta_0)\,P. \qquad (4)$$

Here, P and θ_0 are power and ambient temperature,
respectively; a_0, b_0, c, and d are parameters
given in curve form. Because of the difficulty
of determining the parameters a_0, b_0, c, and d
for each type of relay, the winding overheat is
determined as a function of various ambient
temperatures at a constant value of applied power.
Assuming that the initial ambient temperature equals
20° C, the following expression is given for the

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Dependence of the Winding Overheat and   78108
the Heat Exchange Coefficient of a Relay   SOV/103-21-3-14/21
on the Temperature of Surrounding Air

overheating temperature ϑ_2 above the actual
ambient temperature θ_{o2}:

$$\vartheta_2 \approx \vartheta_1 [1 - 0,00198 (\theta_{o2} - 20)]. \qquad (7a)$$

where ϑ_1 is the initial temperature of overheating.
In order to determine the dependence of the heat
exchange coefficient of the winding on the
temperature, a plot of average values of the heat
exchange coefficient is made as a function of the
temperature of the winding. Based on this ex-
perimentally obtained plot and assuming that the
initial external temperature equals 50° C, the
following expression for the heat exchange coefficient

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Dependence of the Winding Overheat and   78168
the Heat Exchange Coefficient of a Relay   SOV/103-21-3-14/21
on the Temperature of Surrounding Air

is given:

$$q_2 \approx q_1 [1 + 0,00306 (\theta_2 - 50)]. \qquad (13a)$$

where q_1 and q_2 are initial and actual values of
coefficient, respectively. Two examples illustrate
the use of the empirical equations given. There
are 8 figures; and 1 Soviet reference.

SUBMITTED: November 30, 1959

Card 4/4

AUTHOR: Vitenberg, M. I., (Leningrad)

TITLE: Determination of the Heating of Electromagnetic
              Relay Windings (Opredeleniye nagreva obmotok elektro-
              magnitnykh rele)

ABSTRACT: In each individual case, the exact value of the mean
              coefficient of heat dissipation can be determined
              by experimental means only. It has hitherto been given
              by the most authors only within the range from
              $0.9 \cdot 10^{-3}$ to $1.4 \cdot 10^{-3}$ $W/cm^2 \cdot {}^{\circ}C$. The results of experiments
              have shown, however, that in computing the heat values
              of the mean coefficients of heat dissipation for
              small-sized relays these values involve great errors and
              are therefore useless. For small-sized relays this
              coefficient is of a considerably greater value. To
              investigate this problem, measurements were carried out
              on about 100 different electromagnetic relays provided
              with an exterior rotor armature, as well as on 5 types

Card 1/3

Determination of the Heating of Electromagnetic Relay   SOV/142-10-11-5/16
Windings

of such relays of various size, and on 3 large coreless coils. Based on these experiments it is shown that the degree to which the mean coefficient of heat dissipation depends on the cooling surface can be expressed within the limits from $1 < S_k < 100$ cm^2 by formula (5) and

in the limits from $100 < S_k < 5000$ cm^2 by formula (6), respectively. Two limiting cases have been investigated. The characteristic curves obtained showed that in computing it is most precise to consider as cooling surface the sum of the cylindrical exterior and interior surfaces of the relay coils. S_k - cooling surface of the coil in the calculation. The conception of the specific temperature superelevation of the winding is introduced. This conception characterizes the relay design from the standpoint of heat dissipation. To determine the temperature superelevation of the winding and the heating time constants as a function of the cooling surface, and the weight and dimensions of the relay, approximate formulae are also given.

Card 2/3

Determination of the Heating of Electromagnetic Relay   SOV/103-19-11-5/15
Windings

> There are 11 figures and 7 references, 6 of which
> are Soviet.

SUBMITTED: June 19, 1957

Card 3/3

VITENBERG, M. I. (Leningrad)

Determining the heating of electromagnetic-relay windings [with summary in English]. Avtom. i telem. 19 no.11:1036-1047 N '58. (Electric relays)   (MIRA 11:11)

.VITENBERG, M. I.

Vremia otpushkaniia rele pri impul'snom rezhime raboty. (Avtomatika i telemekhanika, 1951, v. 12, no. 1, p. 61-67, diagrs., bibliography)

Title tr.: Release time in pulse-operated relays.

TJ213.A453 1951

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

VITENBERG, M.I

AUTHOR: Not Given.   PA - 2021
TITLE: New Books.
PERIODICAL: Radiotekhnika, 1957, Vol 12, Nr 1, p 81 (U.S.S.R.)
             Received: 2 / 1957   Reviewed: 3 / 1957

ABSTRACT: M.I.VITENBERG: Computation of electromagnetic relays for apparatus
             of automation and communication. Gosenergoizdat, M.L.1956, 464
             pages, price 14.50 roubles.
             Theory and computation of the electromagnetic relays of parallel-
             and alternating current for apparatus of automation and communica-
             tion. Analytical and graphoanalytical methods of computations, con-
             structions, test data. The book is destined to be used by engineers
             and technical engineers.

             M.P.KAPLANOV, V.A.LEVIN: The automatic foundation of frequency, 2.en-
             larged edition. Gosenergoizdat, M.L. 1956, 200 pages, price 11.50
             roubles.
             Description and classification. Computation formulae for construction.
             The book is for radio specialists and advanced university students.

             The Successes attained by Electrovacuum Engineering, edited by Prof.
             G.A.TJAGUNOV, L.M.Gosenergoizdat, 1956, 256 pages, price 10.25 roubles.
             A collection of articles on the types, computation methods, proper-
             ties, and physical phenomena of some new types of electrovacuum de-

Card 1/2

New Books.   PA - 2021

vices. For students, university professors, and engineers.

F.V.MAJOROV: Electron Regulators. M. Gosenergoizdat, 1956, 492
pages, price 14.20 roubles.
Elements and assemblies of electron regulators with uninterrupted and
discrete effect as well as practical schemes.

P.V.SAHAROV: Technology of apparatus construction. Vol 1. Special
features of electro-apparatus construction. Technology of current-
carrying parts and magnetic conductors. M-L-Gosenergoizdat, 1956,
315 pages, price 7.85 roubles. Construction, technical production.

ASSOCIATION: Not given.
PRESENTED BY:
SUBMITTED:
AVAILABLE: Library of Congress.

Card 2/2

BC

Analytical control of production of 4 : 4'-dinitrostilbene-2 : 2'-disulphonic acid. N. BUNTZELMAN and R. VITZABANG (Prom. Org. Chim., 1937, 3, 500—504).—4% H_2SO_4 is added to 10 g. of paste in 500 c.c. of hot H_2O, to complete dissolution, Na_2CO_3 is added until the solution is no longer acid to Congo-red, and the solution diluted to a litre. 200 c.c. of H_2O are added to 50 c.c. of solution, followed by crushed ice, and a 100% excess of $0.1N$-$KMnO_4$ is added. 10 c.c. of 4% H_2SO_4 and 2 g. of KI are added 2 min. later, and I is titrated [1 c.c. of $0.1N$-$KMnO_4$ = 0.0142 g. of Na 4 : 4'-dinitrostilbene-2 : 2'-disulphonate (I)]. 500 c.c. of the solution are heated with Zn and HCl, and the NH_2-group content is determined. The (I) and dinitro-dibenzyldisulphonic acid contents are calc. therefrom

R. T.

Analytical control of production of 4,4'-dinitrostilbene-2,2'-disulfonic acid. S. I. Bunisel'man and R. Vaisenberg. Org. Chem. Ind. (U. S. S. R.) 3, 501 4(1937). Add 4% H_2SO_4 to 10 g. of paste in 500 cc. of hot H_2O, to complete dissoln., add Na_2CO_3 until the soln. is no longer acid to Congo red, and dil. the soln. to a l. Add 50 cc. of H_2O to 50 cc. of soln., then crushed ice and a 100% excess of 0.1 N $KMnO_4$. Two min. later add 10 cc. of 4% H_2SO_4 and 2 g. of KI and titrate I (1 cc. of 0.1 N $KMnO_4$ =. 0.0143 g. of Na 4,4'-dinitrostilbene-2,2'-disulfonate (I)]. Heat 500 cc. of the soln. with Zn and HCl and det. the NH_2 group content. From that are calculated I and dinitrodibenzyldisulfonic acid contents.   B. C. A.

PROCESSES AND PROPERTIES INDEX

Determination of 4,4'-dinitrostilbene-2,2'-disulfonic acid in a mixture with 4,4'-dinitrobibenzyl-2,2'-disulfonic acid. N. I. Buntsel'man and R. V. Vitenberg. Russ. 51,806, Sept. 30, 1937. The stilbene deriv. is titrated with permanganate.

METALLURGICAL LITERATURE CLASSIFICATION

GEL'CHINSKIY, M.L.; DEMAT, M.P.; RYAPOLOV, A.F.; TOKAREV, K.K.; CHIZHOVA, A.N.;
    NEDRIGAYLOV, V.G.; VITENBERG, V.I.; KELLER, Ya.K.; KOLOSOV, S.N.;
    MAKOVITSKIY, B.K.

Drum-pattern for erecting metal towers made of enlarged blocks. Rats. i
izobr. predl. v stroi. no.119:27-29 '55.   (MIRA 9:7)
                        (Towers)

ROMANOV, M.A.; VITENBERG, Ya, L.

Performance of asynchronous motors in airplanes cirucits.
Sam.elektr. no.1:3-20 '60.   (MIRA 14:3)
                        (Airplanes--Electric equipment)

VITENBERG, Ya.L., inzhener.

Three-phase electric motor for work under difficult conditions. Vest. elektroprom. 18 no.1-2:7-10 '47. (MLRA 6:12)

1. Zavod "Dinamo" im. S.M.Kirova.
(Electric motors, Induction)

VITENBERG, Ya. L.   PA 1764

USSR/Electric Machinery   Jan-Feb 1947
    Motors

"Electric Motors Using Three-Phase Current for
 Heavy Operating Conditions," Ya L Vitenberg, 3 pp

"Vestnik Elek Prom" Vol XVIII, No 1-2

Cross-section diagrams, graphs and tabular operating
data

                                       1T64

PHASE I BOOK EXPLOITATION   SOV/4414

Samoletnoye elektrooborudovaniye; sbornik statey, No 1 (Air-
craft Electric Equipment; Collection of Articles, No 1).
Moscow, Oborongiz, 1960. 106 p. Errata slip inserted.
3,600 copies printed.

General Ed.: A. F. Fedoseyev, Candidate of Technical Sciences;
Ed. of Publishing House: K. I. Grigorash; Tech. Ed.: V. P.
Rozhin; Managing Ed.: A. S. Zaymovskaya, Engineer.

PURPOSE: This book is intended for engineers engaged in de-
signing and operating   aircraft electric equipment. It
may also be of interest to those working in the electrical
industry, and to teachers, instructors and students in
electrical engineering schools of higher and secondary
education.

COVERAGE: The book is a collection of 9 articles dealing with
problems in designing, calculating and operating aircraft
electric equipment, and electric motors, regulators, in-
struments, etc. The use of heat-resistant coatings and

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Aircraft Electric Equipment (Cont.)   SOV/4414

electric-insulating materials are discussed. No person-
alities are mentioned. References follow the article by
Gomel'skaya and Yasin.

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Sealing and Impregnating Compounds   83

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AVAILABLE: Library of Congress

                                                         /ec
Card 3/3   10-18-60

CHEKMAREV, A.I.; MIKHEL', M.L.; KRONGAUZ, I.A.; VITENBERG, Ye.M.;
        BABUSHKINA, S.I., red.; KHOHAS, L.I., red.

        [Packing materials for chemicals] Tara dlia khimicheskikh
        produktov. Moskva, Nauchno-issl.in-t tekhniko-ekon.issl.,
        1960. 229 p.   (MIRA 13:8)
                (Chemicals)   (Packing for shipment)

Vitenberg, Ye. M.

Chekmarev, A. I., M. L. Mikhel', I. A. Krongauz, and Ye. M. Vitenberg

Tara dlya khimicheskikh produktov (Containers for Chemical Products)
   Moscow, Nauchno-issl. in-t tekhniko-ekon. issled., 1960. 230 p.
   2,000 copies printed.

Sponsoring Agency: Gosudarstvennyy komitet Soveta Ministrov SSSR po khimii.

Eds: I. A. Krongauz, S. I. Babushkina, and L. I. Khoras.

PURPOSE: This book is intended as a guide for all engineering, technical,
   and planning workers concerned with the packing and shipping of chemical
   products.

COVERAGE: The book discusses the design, manufacture, and utilization of
   all types of containers for chemical products. It includes technical
   data of a nature to permit the proper choice of a container in a given
   situation. New types of containers developed in the Soviet Union, as
   well as foreign experience, are described. The letter designations for

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Containers for Chemical Products   SOV/4657

   all such containers are listed. No personalities are mentioned.
   There are 50 references: 20 Soviet, 19 English, and 11 German.

TABLE OF CONTENTS:

Card 2/5

TEPLITSKIY, B.M.; VITTENBERG, Yu.R., kand. tekhn. nauk, retsenzent;
     LEYKINA, T., red.; KUREPINA, G.N., red.

     [Dividing heads and their use] Delitel'nye golovki i rabota
     na nikh. Moskva, Mashinostroenie, 1964. 215 p.
                                             (MIRA 17:8)

VITENBERG, Yu.R.

S/121/61/000/008/006/006
D041/D113

AUTHOR: None given

TITLE: Dissertations

PERIODICAL: Stanki i instrument, no. 8, 41-42

TEXT: V.P. Grechin presented the dissertation "Heat Resistance and Other
Wear Resistance Factors of Cast Iron and Alloys During Sliding Friction"
at the Institut mekhaniki Akademii nauk USSR (Institute of Mechanics of the
Academy of Sciences Ukrainskaya SSR) in order to obtain a doctor's degree.
The following dissertation were presented for a candidate's degree:
"Investigation of Small-Module Gear-Shapers" by Yu.R. Vitenberg at the
Leningradskiy institut tochnoy mekhaniki i optiki (Leningrad Institute of
Precision Mechanics and Optics); "The Effect of the Structural and Techno-
logical Factors of Spot-Welded and Seam-Welded Joints on the Distribution
of Stress Caused by Load and on the Fatigue Strength" by B.B. Zolotarev at
the TsNII tekhnologii i mashinostroyeniya (TsNII of Technology and Machine
Building); "Investigation of Screw-Nut Pairs During Rolling and Sliding"
by Kumar Basu Sushil at the Moskovskiy stankoinstrumental'nyy institut im.
I.V. Stalina (Moscow Institute of Machine Tools and Instruments im. I.V.
Card 1/2

Dissertations

S/121/61/000/008/006/006
D041/D113

Stalin); "Investigation of the Surface Accuracy and Smoothness Obtained by
Machining Hard and Brittle Materials Using the Ultra-Sound Vibrations Me-
thod" by A.Ya. Vladimirov at the Leningradskiy institut tochnoy mekhaniki i
optiki (Leningrad Institute of Precision Mechanics and Optics); "Effect of
Some Technological Factors on the Surface Quality Obtained by Plane Grinding
by Means of the Disc Periphery" by B.B. Troitskiy at the Moskovskiy stanko-
instrumental'nyy institut imeni I.V. Stalina (Moscow Institute of Machine
Tools and Instruments im. I.V. Stalin); "Investigation of the Automatic
Synchronization of Gear Changing" by I.M. Khovanov at the Moskovskiy ordena
Lenina i ordena Trudovogo Krasnogo Znameni Vyssheye tekhnicheskoy uchilish-
che im. N.E. Baumana (Moscow "Order of Lenin and Order of the Red Banner of
Labor" Higher Technical School im. N.E. Bauman); "Investigation of a Grind-
ing Process with an Oscillating Motion" by Tsáo Shih-Shen at the Moskovskiy
avtomechanicheskiy institut (Moscow Automechanical Institute). [Abstrac-
ter's note: complete translation].

Card 2/2

VITENBERG, Yu.R.

Geometry of a ram machined by abrasive worms. Izv. vys. ucheb.
zav.; prib. no.2:113-118 '59.   (MIRA 13:2)

.1.Severo-zapadnyy zaochnyy politekhnicheskiy institut. Rekomendovana
kafedroy tekhnologii mashinostroyeniya.
                    (Gear-cutting machines)

VITENBERG, YU. R., CAND TECH SCI, "Study Investigation OF SMALL-MODULE GEAR-CUTTING INSTRUMENTS. LENINGRAD, 1960. (MIN OF HIGHER AND SEC SPEC ED RSFSR. LENINGRAD INST of PREC MECH AND OPTICS). (KL, 2-61, 207).

-120-

VITENBERG, Yu.R.

Investigating gear cutters having a nonlinear relationship between the displacement of the initial contoru and the magnitude of the cut-off layer. Izv.vys.ucheb.zav.; prib. 5 no.6:123-129 '62.
(MIRA 15:12)

1. Severo-zapadnyy zaochnyy politekhnicheskiy institut. Reko-mendovana kafedroy tekhnologii mashinostroyeniya.
(Gear cutting)

VITENBERG, Yuriy Ruvimovich; FIRUN, N.B., red.; ALABYSHEVA,
N.A., red.izd-va; BELOGUROVA, I.A., tekhn. red.

[Grinding gear teeth with an abrasive worm] Zuboshlifo-
vanie abrazivnym cherviakom. Leningrad, 1963. 25 p.
(Leningradskii dom nauchno-tekhnicheskoi propagandy. Ob-
men peredovym opytom. Seriia: Mekhanicheskaia obrabotka
metallov, no.13)   (MIRA 17:1)

VITENBERG, Yu.R.

Irregularities in profiles, their calculation and relation-
ship with parameters of gear teeth slotting. Izv.vys.ucheb.
zav.; prib. no.6:66-71 '58.   (MIRA 12:12)

1. Leningradskiy zaochnyy politekhnicheskiy institut.
          (Gear cutting)

VITENBERG, Yu. R.

LOSKUTOV, Vasiliy Vasil'yevich; KUVSHINSKIY, V.V., kandidat tekhnicheskikh
    nauk, retsenzent; VITENBERG, Yu.R., inzhener, retsenzent; IL'NITSKIY,
    I.I., kandidat tekhnicheskikh nauk, redaktor; SARAFANNIKOVA, G.A.,
    tekhnicheskiy redaktor

    [Gear-cutting machines] Zuboreznye stanki. Moskva, Gos. nauchno-
    tekhn.izd-vo mashinostroit. lit-ry, 1957. 73 p. (Nauchno-populiarnaia
    biblioteka rabochego stanochnika, no.26)   (MLRA 10:8)
            (Gear-cutting machines)

SOBOLEV, N.P.[deceased]; VITENBERG, Yu.R.; SHAVLYUGA, N.I., kand. tekhn. nauk, retsenzent; FIRUN, N.B., kand. tekhn. nauk, red.; CHFAS, M.A., red.izd-va; VARKOVETSKAIA, A.I., red. izd-va; BARDINA, A.A, tekhn. red.

[Gear-cutting machines and tools used in the instrument industry] Zuboobrabatyvaiushchie stanki i instrumenty v priborostroenii. Moskva, Mashgiz, 1963. 306 p.
(MIRA 16:10)

(Instrument industry)   (Gear-cutting machines)

VITENBURG, V.L.; DROZDIK, B.M.

Cold breaking of bars. Kuz.-shtam.proizv. 1 no.3:42-44
My '59.   (MIRA 12:10)
      (Hydraulic presses)

VITENBERGS, Guntis; GRANTS, Elmars; ROZENBERGA, R., red.; LEMBERGA, A.,
        red.

        [Is the incidence of cancer increasing?] Vai saslimstiba ar vezi
        klust biezaka? Riga, LPSR Zinatnu akademijas izdevnieciba,
        1961.   42 p.   (MIRA 15:2)
                     (LATVIA--CANCER)

I 39387-65   EWT(d)/T   IJP(c)

ACCESSION NR: AR5004811   S/0044/64/000/011/B120/B120

SOURCE: Ref. zh. Matematika, Abs.

AUTHORS: Viten'ko I. V. Kostovs'kyy, C. M.

TITLE: Generalized transformation formulas in the methods of
Lobachevskiy-Greffe and Lemer

CITED SOURCE: Sb. Teor. i prykl. matem. Vyp. 2. L'viv, L'vivs'k.
un-t, 1963, 31-35

TOPIC TAGS: Laurent series, transformation formula

TRANSLATION: The authors derive formulas for the calculation of the
coefficients of Laurent-series expansion of the functions

$$f_k(z) = \prod_{l=0}^{k-1} f(\omega_l^{(k)} z^{\frac{1}{k}}) = \sum_{l=-\infty}^{\infty} a_l^{(k)} z^l.$$

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ACCESSION NR: AR5004811.

$$= \sum_{l=-\infty}^{\infty} b_l^{(k)} z^l.$$

where

$$P_o(z) = \ldots$$

in terms of the coefficients of the Laurent series

$$f(z) = \sum_{l=-n}^{n} a_l z^l$$

and the auxiliary series

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L 39367-65
ACCESSION NR: AR5004811

$$v(z) = \sum_{l=-\infty}^{\infty} b_l z^l$$

The auxiliary series v(z) is chosen such that f(z) and v(z) have a
common convergence ring. The particular case when $v(z) = z^l$ (l --
arbitrary integer) and

$$f(z) = \sum_{l=0}^{\infty} a_l z^l, \ a_0 \neq 0.$$

is considered separately. N. Lyashchenko.

SUB CODE: MA   ENCL: 00

Card   3/3

VITEN'KO, I.V.; KOSTOVSKIY, A.N.

Division and factorization of Laurent series. Dokl. AN SSSR 162 no.1:
15-18 My '65.   (MIRA 18:5)

1. L'vovskiy gosudarstvennyy universitet im. Iv.Franko. Submitted
November 20, 1964.

VITEN'KO, I.V.; KOSTOVSKIY, A.N.

Determining the principal indices of Laurent series. Dokl.
AN SSSR 155 no. 4:732-734 Ap '64.   (MIRA 17:5)

1. L' 'ovskiy gosudarstvennyy universitet im. Ivana Franko.
Predstavleno akademikom A.A.Dorodnitsynym.

VITENKO, Vadim Aleksandrovich; POLYAK, Revera Yakovlevna; SEGAL', Z.G.,
vedushchiy red.

[Northern Lugansk key well (Lugansk Province)] Severo-Luganskaia
opornaia skvazhina (Luganskaia oblast'). Leningrad, Gostoptekhizdat,
1963. 135 p. (Vsesoiuznyi neftianoi nauchno-issledovatel'skii
geologorazvedochnyi institut. Trudy, no.222).   (MIRA 17:4)

POLYAK, R.Ya.; VITENKO, V.A.

Mineralogical associations in Permian and Triassic sediments of the
Chernigov salient. Trudy UkrNIGRI no.1:122-124 '59.

(MIRA 12:12)

(Ukraine—Mineralogy)

VITENKO, V.A [Vitenko, V.O.]; POGREBNYAK, V.A [Pohrebniak, V.O.]; POLYAK, R.Ya.

Sediments of the Moscovian stage of the north Lugansk key well.
Geol.zhur. 21 no.3:87-93 '61.   (MIRA 14:7)

1. UkrNDGRI.
            (Novoaydar District—Geology, Stratigraphic)

3/169/60/000/006/002/021
A005/A001

Translation from: Referativnyy zhurnal, Geofizika, 1960, No. 6, p. 29, # 5751

AUTHOR: Vitenko, V. A.

TITLE: The Main Feature of the Geologic Structure of the Chernigov
Gravitational Maximum Region

PERIODICAL: Tr. Vses. n.-i. geologorazved. neft. in-t, 1958, No. 12, pp. 140-152

TEXT: The geophysical research in the last years and deep drilling
eludicated the geologic feature of the Chernigov region having a gravitational
maximum. A volcanic-sedimentary stratum of 1,160 m thickness occurs above
crystalline Pre-Cambrian rocks detected at the 2,747-m depth; this stratum
pertains to the Middle and Upper Devonian. The overlying deposits occur above
the Devonian system. Magnetic anomalies associated with the gravitation maximum
region and reaching 600 γ, and, partly, the maximum itself, are caused by the
volcanic-sedimentary stratum having the maximum magnetic intensity in the region.
The principal gravitation effect is appearently caused by the nonuniform
crystalline-base structure and its relief   The author assumes that the Chernigov-
maximum-region represents a protrusion of the relatively shallow crystalline-base

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S/169/60/000/006/002/021
A005/AC01

The Main Feature of the Geologic Structure of the Chernigov Gravitational
Maximum Region

limited in East and West by breaks. This protrusion acted the part of a dam,
which hampered the connection between the Dnepr-Donets depression central part
and the Pripyat' graben. However, the Pripyat' graben was directly connected
with the Dnepr-Donets depression in the course of long periods and appears
probably to be one of its tectonic elements.

T. N. Fedotova

Translator's note: This is the full translation of the original Russian
                   abstract.

Card 2/2

VITENKO, V.A.

Chernigov key well. Trudy VNIGNI no.24:5-52 '60.
(MIRA 13:7)
(Chernigov Province—Petroleum geology)
(Chenigov Province—Gas, Natural—Geology)

VITENKO, V.A.

    Basic features of geological structure in the region of the
Chernigov gravity maximum. Trudy VNIGNI no.12:140-152 '58.
                                  (MIRA 12:3)
      (Chernigov region--Geology, Stratigraphic)

VITENKO, V.A.; POLYAK, R.Ya.

Lower Carboniferous sediments of the region of the North-Lugansk key well. Trudy UkrNIGRI no.5:49-63 '63.

Lower-Triassic sediments of the region of the North-Lugansk key well. Ibid.:64-67   (MIRA 18:3)

BARANOV, I.G.; VITENKO, V.A.; ZAV'YALOV, V.M.; MUROMTSEV, A.S.

Possible reserves of oil and gas in the Dnieper-Donets Lowland.
Geol. nefti i gaza 5 no.7:17-19 Jl '61.   (MIRA 14:9)

1. Ukrainskiy nauchno-issledovatel'skiy geologorazvedochnyy
institut.
        (Dnieper-Donets Lowland--Petroleum geology)
        (Dnieper-Donets Lowland--Gas, Natural--Geology)

BAUBINIENE, A. doc.; JANKEVICIUTE, J., doc.; VITENSTEINAS,G., doc.;

Clinico-anatomical aspects in the diagnosis of myocardial infarction. Sveik. apsaug. 9 no.1:10-15   Ja'64.

1. Kauno Valst. medicinos institutas. Rektorius: prof. Z.Januskevicius.

VITENSHTEYNAS, G.A. (Kaunas)

Some peculiarities of the effect of atropine on the heart. Klin.med.
35 no.5:48-50 My '57.
                                                    (MIRA 10:8)

1. Iz gospital'noy terapevticheskoy kliniki (zav. kafedroy - dotsent
Z.I.Yanuchkyavichus) Kaunasskogo meditsinskogo instituta
        (ATROPINE, eff.
            on heart funct., ECG)
        (ELECTROCARDIOGRAPHY, eff. of drugs on
            atropine)

VITENSHTEYNAS, G.A.

LASHAS, A.V.; VITENSHTEYNAS, G.A.

Evaluating electric ballistocardiographic methods. Med.prom.12
no.3:27-33 Mr '58.   (MIRA 11:4)

1. Kaunasskiy politekhnicheskiy institut i Kaunasskiy gosudarstvennyy
meditsinskiy institut.
              (BALLISTOCARDIOGRAPHY)

USSR / Human and Animal Physiology. Blood Circulation.   T

Abs Jour: Ref Zhur-Biol., No 9, 1958, 41285.

Author   : Januskevicius, Z.; Vitenstejnas, G.
Inst   : Not Given.
Title   : Ballistocardiography and Its Clinical Significance.

Orig Pub: Sveikatos aspauga, 1957, No 6, 30-37.

Abstract: No Abstract.

Card 1/1

60

JANUSKEVICIUS, Z.; VITENSTEINAS, G.; SUMINAS, A., red.; VYSOMIRSKIS,C.,
tekhn. red.

[Practical electrocardiography] Praktine elektrokardiogra-
fija. Vilnius, Valstybine politines ir mokslines litera-
turos leidykla, 1962. 134 p. (MIRA 16:5)
(ELECTROCARDIOGRAPHY)

SOV/177-58-3-9/29

17(1,7)
AUTHOR: Vitenshteynas, G.A.

TITLE: Some Observations on the Article by R.M. Bayevskiy
                 "Ballistocardiography and the Possibility of Using
                 It in Military Medicine"

PERIODICAL: Voyenno-Meditsinskiy Zhurnal, 1958, Nr 3, pp 41-42
                 (USSR)

ABSTRACT: The article by R.M. Bayevskiy (Military Medical Jour-
                 nal Nr 5, 1956) touches on the very topical problem of
                 the wide-spread introduction into practice of the me-
                 thodology of direct ballistocardiography. This metho-
                 dology is undoubtedly valuable because it supplements
                 our diagnostic potential. Turning to the registration
                 and analysis of ballistocardiography, it should be re-
                 called that fatigue of a patient, a full stomach, or
                 trembing of the extremities, table or floor may pro-
                 duce artefacts which complicate correct analysis of
                 the ballistocardiogram. Therefore it is better to
                 take the ballistocardiogram before the patient has
Card 1/3   eaten, after 15-30 minutes' rest, on a convenient

SOV/177-58-3-9/29

Some Observations on the Article by R.M. Bayevskiy "Ballistocardio-graphy and the Possibility of Using it in Military Medicine"

table, in a warm room, etc. It must be assumed that the method proposed by Bayevskiy of taking the balli-cardiogram in the short period of 1 minute without giving the patient rest may lead to inaccurate record-ings and may affect the artefacts. The expediency of recording the ballicardiogram without removing heavy boots from the patient is also questionable. To save time the author recommends taking ballistocardiograms without electrocardiograms. However, when saving the time needed for attaching electrodes to the extremi-ties, the author will be unable to determine the dis-tances RI, RJ and RK to which he attributes diagnostic significance. The simplified method proposed by Bay-evskiy for taking ballistocardiograms, which stems from his desire to save the maximum amount of time, does not give a sufficiently full and accurate record and may mislead doctors and reduce the value of the method of ballistocardiography itself. The ballisto-cardiograph developed by Bayevskiy essentially differs

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Some Observations on the Article by R.M. Bayevskiy "Ballistocardio-
graphy and the Possibility of Using it in Military Medicine"

SOV/177-58-3-9/29

little from the apparatus recommended by Academician
V.V. Parin, V. Dok and Mandel'baum. Their apparatus
is also portable, simple, and the data are recorded
by means of an electrocardiograph. The support pro-
posed by the author, with its right angles on which
the feet are laid, seems to us inconvenient because
under the force of gravity the tissue of the extremi-
ties will be pressed against the angles of the support,
which may cause an involuntary contraction of the
muscles. In our opinion, the leg should be supported
by a well-stuffed oilcloth cylinder. In practice
well-known and well-tested apparatus and methods
should be used, while new apparatus can only be pro-
posed for widespread use after thorough testing.

Card 3/3

YANUSHKEVICHNUS, Z.I. [Januškevičius,. Z.I.], prof.; VITXNSHTEYNAS, G.A. [Vitenšteinas, G.A.]

Clinical significance and classification of ballistocardiograms. Terap.arkh. 31 no.9:31-36 S '59. (MIRA 12:11)

1. Iz kafedry gospital'noy terapii (zav. - prof. Z.I. Yanushkevichus) Kaunasskogo meditsinskogo instituta.
(BALLISTOCARDIOGRAPHY)

YANUSHKYAVICHUS, Z.I., prof. [Januškevičus, Z.I.]; VITENSHTEYNAS, G.A.
[Vitenšteinas, G.A.]; MITSKIS, A.M. [Mickis, A.M.], kand.med.nauk
(Kaunas)

A case of so-called visceral epilepsy simulating acute abdomen.
Klin.med. 37 no.9:146-147 S '59. (MIRA 12:12)

1. Iz kafedry gospital'noy terapii (zav. - prof. Z.I. Yanushkyavichus)
i kabineta elektroentsefalografii (zav. - dotsent A.M. Mitskis) Kaunas-
skogo meditsinskogo instituta.
    (ABDOMEN, ACUTE diagnosis)
    (EPILEPSY, pathology)

VITENSHTEYNAS, G. A., and YANUSHKEVICIUS, Z. I. (Dr.)

"Concerning Clinical Significance and Classification of Ballistocardiography,"

reports submitted at Fifth Internationl Congress of Medicine, (Internal).
Philadelphia, Pa., April 24-26, 1958.

3rd Therapy Clinic, Kaunas Medical Inst, Lith SSR
        Chief - YANUSHKEVICIUS
        Asst - VITENSHTEYNAS, G. A.

VITENSHTEYNAS, G.A. [Vitensteinas, G.A.] (Kaunas)

Classification of ballistocardiographic data. Klin.med. 36 no.1:95-98 Ja '58. (MIRA 11:3)

1. Iz kafedry gospital'noy terapii (zav.-prof. Z.I.Yanushkyavichyus [Z.I.Januškevičius]) Kaunasskogo meditsinskogo instituta.
         (BALLISTOCARDIOGRAPHY
           classif. of data (Rus)

VITENSHTEYNAS, G. A., Cand Med Sci -- (diss) "On the problem
of the classification and diagnostic value of ballistocardiographic
data in coronary sclerosis." Kaunas, 1958. 26 pp (Min of
Health of Lithuanian SSR, Kaunas State Med Inst), 200 copies
(KL, 35-58, 109)

USSR/Pharmacology and Toxicology. Cholinergics   V-5

Abs Jour : Ref Zhur - Biol., No 10, 1958, No 47202

Author   : Vitenshteynas G.A.
Inst   : -
Title   : Certain Peculiarities of Atropine Stimulation of the Heart

Orig Pub : Klinich. meditsina, 1957, 35, No 5, 48-50

Abstract : In 50 patients with vegetative disorders of the cardiovas-
           cular system, the following changes of EKG. were observed
           after 1 ug. of atropine was introduced subcutaneously; an
           increase or a decrease of the pulse rate, galloping alter-
           ation of rhythm, change of the atrioventricular rhythm to
           sinus rhythm, disappearance of ventricular extrasystoles.
           In one patient, following the injection of atropine, symp-
           toms of coronary insufficiency developed.--F.G. Sivashinskaya

Card   : 1/1

VITENSHTEYNAS, T. [Vitensteinas, T.]; KYAULEYKIS, I. [Kiauleikis, I.]

Hemangiectatic hypertrophy (Klippel-Trenaunay-Weber syndrome).
Vest. derm. i ven. 38 no.7:69-72 Jl '64.

(MIRA 18:4)

1. Kafedra gospital'noy terapii (zav. -- chlen-korrespondent
AMN SSSR prof. Z.Yanushkevichus [Januskevicius, Z.] Kaunasskogo
meditsinskogo instituta.

343.   CERTAIN PECULIARITIES OF ATROPINE ACTION ON THE HEART
     (Russian text). Vitenshteynas G.A. KLIN.MED. (Mosk.) 1957, 35/5
     (48-50) Graphs 14

Atropine was injected s.c. in a dose of 1 mg. in 50 patients under the age of 30
yr. with autonomic disturbances of cardiovascular function, and observations
(pulse and ECG) were made during the following hour. Slowing of the pulse was
observed in most cases, but at different speeds and in different ways. In some
cases the frequency increased and in one case an attack of angina pectoris occurred
The use of atropine in cases of functional cardiovascular disturbances can only be
based on a strictly individual assessment of the dosage.   Vacek - Brno (II, 18)

L 47??b-66

ACC NR₁ AP6032012   SOURCE CODE: UR/0243/66/000/009/0044/0047

AUTHOR: Yanushkevichus, Z. I.; Vitenshteynas, G. A.; Valuzhis, K. K.

ORG: Kaunas Medical Institute, TsNIL (Kaunasskiy meditsinskiy institut, TsNIL)

TITLE: Device for obtaining phonocardiogram envelopes (PKG)

SOURCE: Meditsinskaya promyshlennost' SSSR, no. 9, 1966, 44-47

TOPIC TAGS: phonocardiogram, telemetry, physiology, medical electronics, cardiac physiology, signal envelope, envelope recording, physiological data, PHONOCARDIOGRAPHY, ELECTRONIC CIRCUIT, DIAGNOSTIC INSTRUMENT

ABSTRACT: The frequency characteristics of most pen-writing recorder systems (≤ 100 cps) present difficulties in recording phonocardiograms (PKG's), whose high-frequency components are subject to distortion. To avoid these difficulties, the authors propose a phase-rotation device with the following characteristics: 1) from the input signal the circuit forms two output signals with a phase difference of 90° for all frequency components; 2) output phase characteristics are in logarithmic dependence on frequency; 3) amplitude-frequency characteristics are straight and parallel to the frequency axis; 4) working frequency ranges are from 20 to 300 and from 60 to 900 cps; 5) the accuracy of phase rotation is ±2°. This system will record only the geometrical envelope of the PKG signal, which gives full information on the form, amplitude, and duration of sound signals and is sufficient for clinical analysis of PKG's. The idea of using envelopes in medical electronics is not new, and the drawbacks of envelope recording

Card   1/2   UDC: 616.12-073.43-073.96-71

L 47294-66

ACC NR: AP6032012

for low-frequency processes have been described. The authors compared their system against a conventional full-wave detector with equal charge and discharge times in its smoothing filter. It was found that the detector did not give envelopes as good as those obtained with the proposed instrument. Orig. art. has: 3 formulas, 1 circuit diagram, and 2 figures. [DP]

SUB CODE: 06/ SUE.. DA.E. 05Apr66/ ORIG REF: 004/ OTH REF: 003/ ATD PRESS: 5092

Card 2/2

VITENSTEINAS, G.A. (Kaunas)

Paradoxal reaction to atropine in heart block. Klin. med. 32
no.10:87 O '54.   (MLRA 8:1)
        (HEART BLOCK,
            paradoxal reaction to atropine in)
        (ATROPINE, effects,
            paradoxal reaction in heart block)

VITENSON G. I.

U S S R .

Experiment' in the Modification of Cast Iron by
Opyt modifitsirovaniia chuguna magniem. (Rus-
_____ R. S. Tripol'skaia, and R. I. Galaiko.
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Chemical composition and specific wt. of slags formed under
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VITENZON, A.A. (Khar'kov)

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Study of nerve processes on the basis of visual aftereffects in
cases of lack of sleep. Zhur.vys.nerv.deiat. 6 no.2:212-217 Mr-Ap '56.
(MIRA 9:8)

(CENTRAL NERVOUS SYSTEM, physiol.
   eff. of lack of sleep, determ. by measurement of after-
   effect of visual light stimulation)
(SLEEP, physiol.
   eff. of lack of sleep on CNS, determ. by measurement of
   after-effect of visual stimulation with light)
(REFLEX
   after-eff. of visual stimulation with light in determ.
   of eff. of lack of sleep)

VITENSON, A. S.

USSR/Human Physiology - Nervous System.

R-12

Abs Jour   : Referat Zhur - Biologiya, No 16, 1957, 71174

Author   : Vitenson, A.S.
Title   : The Study of Nervous Processes in the Course of Subsequent
        Visual Reactions After Lack of Sleep.

Orig Pub   : Zh. Vyssh. nerv. Deyat-sti, 1956, 6, No 2, 212-217

Abstract   : The influence of lack of sleep (2-6 hrs sleep) on the subsequent
visual reaction (VR) differs depending on the individual vari-
ant of VR in sufficient sleep, and reflects the typological pe-
culiarities of the nervous system of the subjects. Four vari-
ants are shown in the course of VR: 1) latent period (LP) $\frac{1}{2}$-2
sec., duration of VR (DRV) 15-25 sec; 2) LP 3-6 sec., DVR 8-15
sec; 3) $\frac{1}{2}$-$1\frac{1}{2}$ sec, DVR 2-6 sec; 4) LP 3-6 sec., DVR 15-30 sec.
In lack of sleep the VR of the 2nd type are the most depressed,
a fact which reflects the weak nervous processes with prepon-
derance of inhibition. LP becomes longer, VR shorter (to zero),
the strength relations are damaged. A paradoxical phase was

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noted in five tests and appeared at a low level, i.e., the VR decreased at all levels of excitation, but in strong excitants the decrease was larger than in weak ones. In the first and fourth types, representing strong nerve processes with some predominance of excitation, the lack of sleep has less influence on the VR. The strength relations are not always disturbed. The paradoxical phase appears at a low level, i.e., to strong irritants the VR decreases, to weak ones it increases. In the third type, (strongly balanced nerve processes), the influence of lack of sleep on VR is insignificant. Caffeeine (0.05- 0.2 gm) in lack of sleep can have on the VR of the 1st and 2nd type a normalizing as well as depressing influence. The last probable arises from incorrect dosage of caffeine. The basis for the apparent changes in VR in lack of sleep is, according to the author, the lowering of the work capacity of the nerve elements of the visual analyzer.

Cari 2/3

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          (primarily cortical as the most reactive ones).
          Under these conditions even the moderately strong visual
          stimuli are sufficient for the development of a limiting
          defense inhibitions.

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2986. VITENSON A. S. *Physiological mechanism of the tracing reactions in the sight analyser (Russian text)* Z. vyssh. nerv. dejatel. 1956, 6/2 (218—225) Tables 8

The sight-tracing reactions depend on the functional state of the cerebral cortex. During the increase of the unconditional depression the latent period is prolonged and the tracing reaction diminishes and disappears. On stimulation of the cortex the sight-tracing reactions increase. We may presume that the sight-tracing reaction and the latent period arise as a consequence of the different phases of successive induction; the change of this state depends on the functional state of the cerebral cortex.   Bajer — Brno

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        (AFTER-IMAGES)   (MIRA 11:4)